

(50 分) Network+ 网络工程师 网络工程

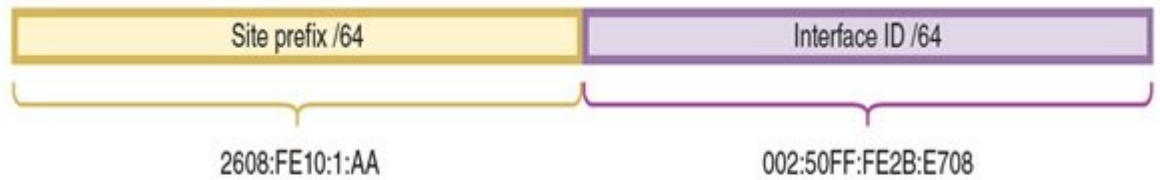
[illegible]

0000 0000 0000 (Network+) 0000 00000 0000 0 000000 00000 000 0 000 000 000000 0000

IPv6 □□ □□□□□□□□

[illegible]

1. A B 1000 1000 1000 IPv6 . 1000 1000 1000 IPv6 . 1000 1000 IPv6 . 1000 C



• IPv6 주소는 128비트입니다.

• IPv6 주소는 18,446,744,073,709,551,616개의 주소가 있습니다.

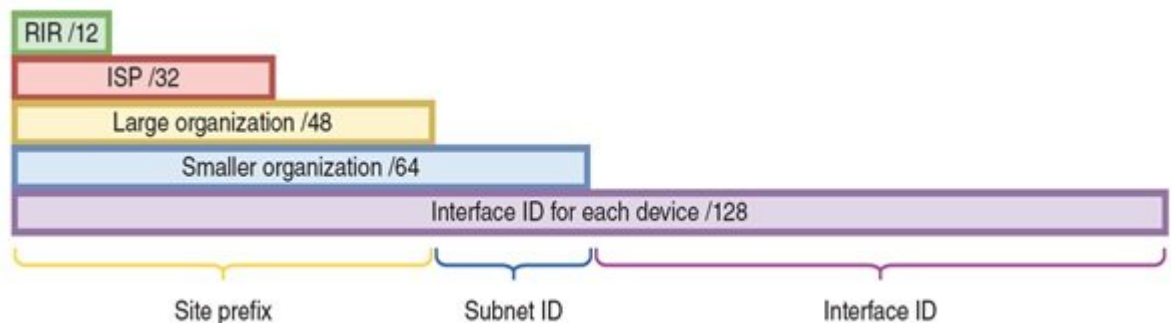
IPv6 주소는 Unicast, Multicast, Anycast, Broadcast로 나뉩니다. Unicast 주소는 하나의 장치에 할당되며, Multicast 주소는 여러 장치에 할당됩니다. Anycast 주소는 여러 장치 중 하나에 할당되며, Broadcast 주소는 모든 장치에 할당됩니다. IPv6 주소는 128비트이며, 16진수로 표현됩니다.

2608:FE10:1:AA:002:50FF:FE2B:E708

: Site prefix, Interface ID

• Site prefix는 64비트입니다. (예: 2608:FE10:1:AA)

• Interface ID는 64비트입니다. (예: 002:50FF:FE2B:E708)



Site prefix

2608:FE10:1:AA:002:50FF:FE2B:E708

Interface ID

2608:FE10:1:AA

• Site prefix

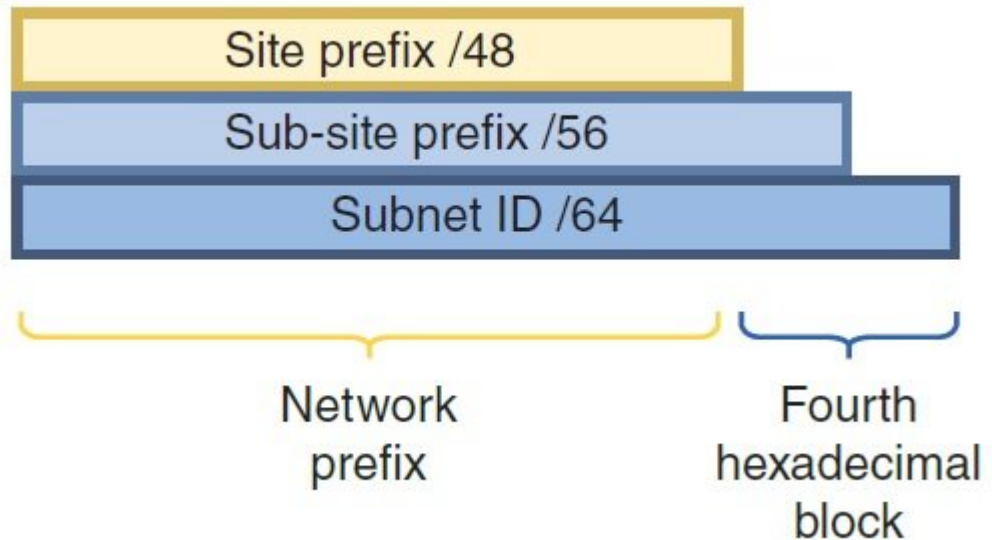
002:50FF:FE2B:E708

• Interface ID

2608:FE10:1:AA::/64

•

 regional Internet registry (RIR)
 FE10::/32:2608 32
 48
 FE10:1::/48:2608
 64 FE10:1:AA::/56:2608 56
 FE10:1:AA::/64:2608



. 16
 65 536 16 48 /
 64 / 256 56 /
 () 18
 IPv6 !

. FE10:1/48:2608

0000 0000 0000 0000

.

1111 1111 1111 1111

:

0001 0000 0000 0000

0010 0000 0000 0000

0011 0000 0000 0000

0100 0000 0000 0000

...

1100 1111 1111 1111

1101 1111 1111 1111

1110 1111 1111 1111

000 0000 00 000000 000000 00 00 000000 0000 00 .000 0000 00000000 0000 650536 000000 00

2608:FE10:1:AA/56

: 000 000 000 000 00 0000 0000000 256 00000 0000 000 000 00 0000000

0000 0000

0001 0000

0010 0000

...

1101 1111

1110 1111

1111 1111

000000 000000 .0000000 00000000 000000000 0 000000 000 00 00 0000 000 000000000 000000 0000
 0000 000 0000 :000000 0000000 000000 000 00 00 Subnet ID 0000 00 0000000 000 00 00 000 000
 000000 000000)000000 00 00 0000000000000 0000 0000 0000 0 (000000 0000000 00 0000000 0000000
 .(000000 00 00000000 00

00000000 0000 .0000 000000 00 0000 000 000 IPv6 00000000 00 00 00000000 00000000 0000 00 0000 0000
 000000 00 00000000 0000 000 00000000 000 00000000 00 00 00 000000 0000 000000 0000000000 00000000 0000
 .000000 000000 0000 000 00 000000000000 00000000 0000 0000 0000000000

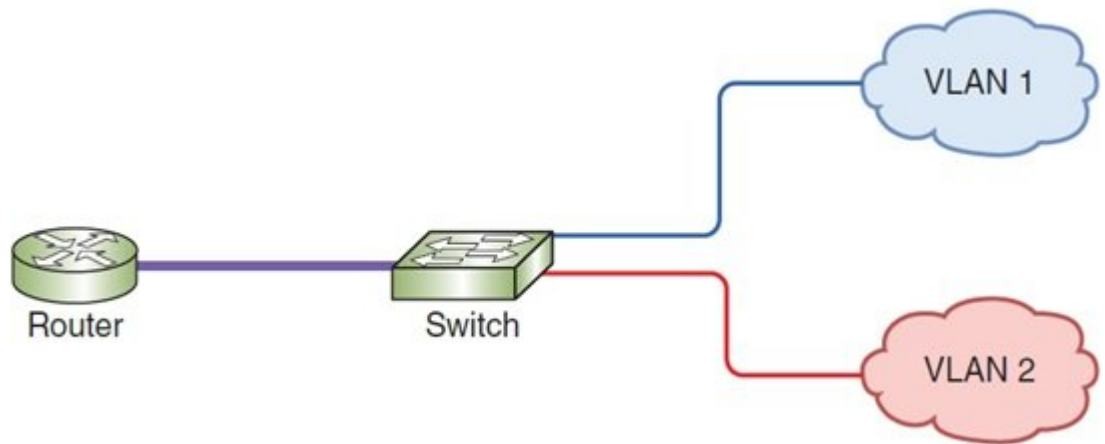
00000000 00 0000 000000 0 00000000 0000000000 0000 0000 00 0000000000 000000 000000 000 00 000000
 00 0000 000000 0000 00 0000 000000 0000 000000 000 000000 00 0000 00000000 000000 00 IPv6 0 IPv4
 .000000 000 00 0000000000 000000 (VLAN) 000000 0000 00000000 00000000 00 0000

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

00000000 000 .0000 0000 00000 0000 00000000 0 0000000000 000000000 0 00000000 00 00 000 0000 00000
 0000 00 00000 000 00 0000 0000 00 000 00 000000000 000000000 00000000 0000 00000000 00 0000 00
 00 0000 00 (3 0000 00000 00) 0000000 0000 00000 00 0000 000 000 .0000 0000000000 0000000 0000000
 00 00000 000 00 .00000 00000 (3 0000 00000 00) 0000 0000 00 000 0000 00000 00 00000000 00
 0000000 0000 00 0000 00000000 0000 00000000 00000000 0000000000 00 000000 0000 0000 00 000000000000
 .0000000 00000

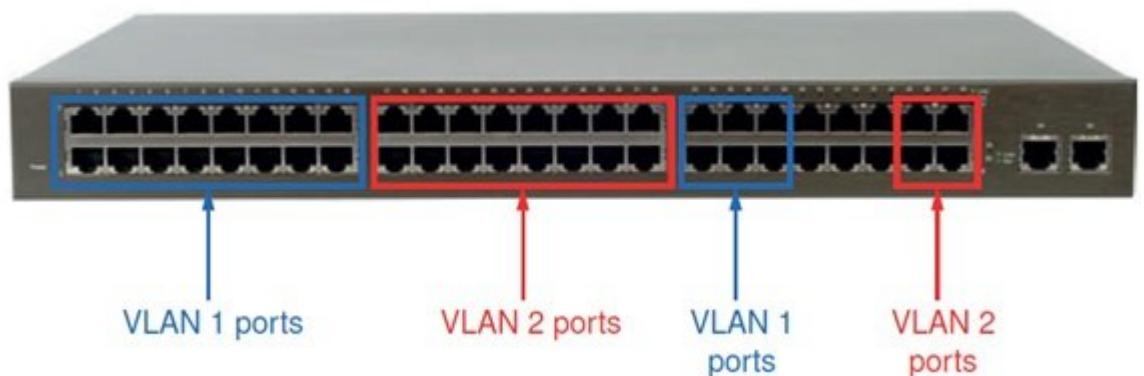
0000 0000 00 00 000000 Virtual Local Area Networks 00000 (VLAN) 00000 0000 0000 00 000000 00
 000000 0000 0000 00 000000 00000 00000 000 0000 000000 00 000000 00 0000 00 000000 0000 0000 2
 0000 0000 VLAN 000 00 00 000000000 .000 000000 000000 0000 00000 00 00 0000000 00 0000 0000

이제 우리는 라우터와 스위치 간의 연결을 설정하고, 스위치에서 VLAN 1과 VLAN 2를 생성할 것입니다.

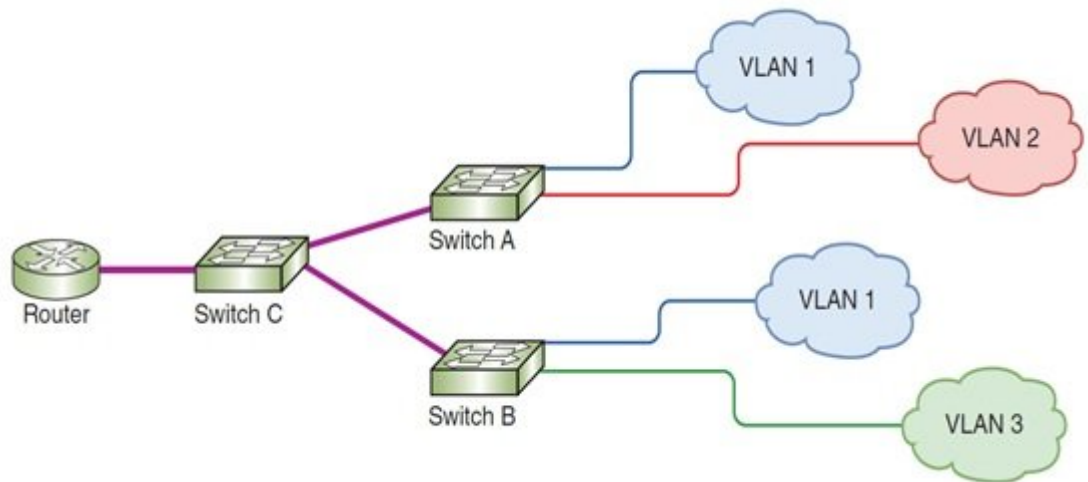


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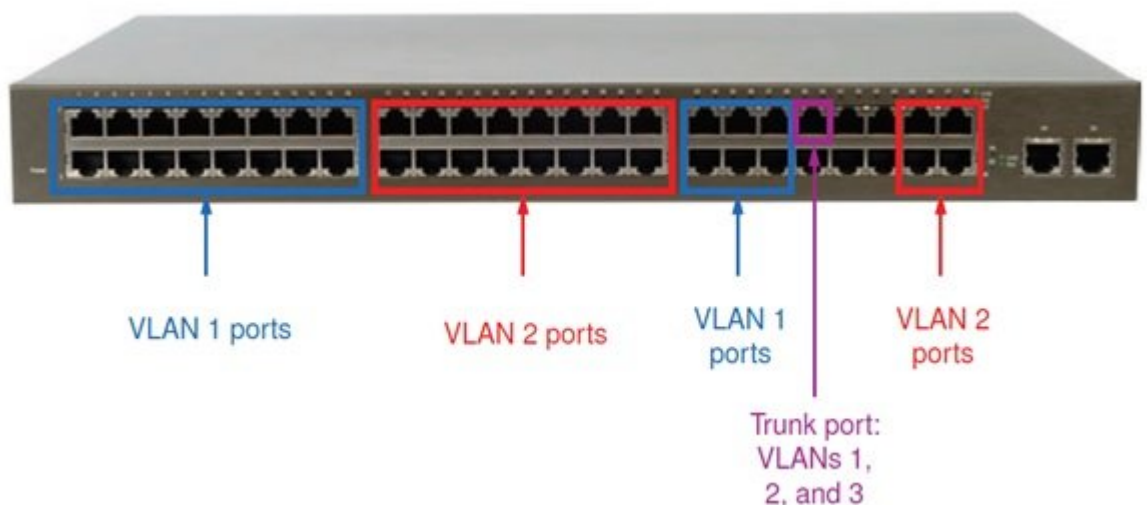


Access ports are used to connect end devices to the network. In this topology, the ports on Switch A and Switch B that connect to the VLANs are access ports. These ports are configured to belong to a specific VLAN. For example, the port on Switch A connected to VLAN 2 is an access port for VLAN 2. The ports on Switch B connected to VLAN 1 and VLAN 3 are access ports for those respective VLANs.

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• Trunk ports are used to connect switches to each other. These ports are configured to carry traffic for multiple VLANs. In this topology, the connection between Switch C and Switch A is a trunk link. The ports on these switches that form the trunk link are trunk ports.

Trunking is the process of carrying multiple VLANs over a single link. This is achieved by tagging each frame with a VLAN ID. The receiving switch then uses this tag to deliver the frame to the correct VLAN. In this topology, the link between Switch C and Switch A is a trunk link that carries traffic for all three VLANs (VLAN 1, VLAN 2, and VLAN 3).



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Understanding VLAN Trunk Protocol



<https://www.shabakeh-mag.com/networking-technology/15267/%D8%A2%D9%85%D9%88%D8%B2%D8%B4-%D8%B1%D8%A7%D8%B8%D8%8C%D8%A7%D9%86->

[%D8%AF%D9%88%D8%B1%D9%87network-%D8%A8%D8%AE%D8%B4-50](#)